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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of the Claims:

1. (Currently amended) A field emitter composition comprising:

a quantity of carbon black; and

a quantity of a mixing medium;

wherein said quantity of carbon black is dispersed in said mixing medium that includes an ingredient selected from the group consisting of a photoresist, a polymer that is converted into diamond by heat, and a polymer selected from the group consisting of epoxies, polycurethanes, polyacrylates, polyesters, and polyimides.

2. (Cancelled)

3. (Currently amended) The invention of claim 1 wherein said mixing medium comprises a photoresist selected from the group consisting of a photosensitive photoresist or a non-photosensitive photoresist.

4. (Original) The invention of claim 1 wherein said field emitter composition is defined in a desired pattern.

5. (Original) The invention of claim 1 wherein said mixing medium has a viscosity of less than approximately 1500 cps.

6. (Original) The invention of claim 1 wherein said mixing medium has a viscosity of less than approximately 250 cps.

7. (Original) The invention of claim 1 further comprising an organic solvent, said organic

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solvent providing a desired viscosity to said field emitter composition.

8. (Original) The invention of claim 1 wherein said field emitter has an extraction field from about 1 V/μm to about 20 V/μm.

9. (Original) The invention of claim 1 wherein said carbon black comprises diesel fuel exhaust.

10-11. (Cancelled)

12. (Original) The invention of claim 4 wherein said field emitter forms part of an integrated circuit.

13. (Original) The invention of claim 1 wherein said field emitter composition is disposed on a substrate surface.

14. (Original)The invention of claim 13 wherein said substrate surface is planarized utilizing a chemical mechanical polishing step.

15. (Original) The invention of claim 13 wherein said substrate surface is a non-planar surface.

16. (Original) The invention of claim 1 wherein said mixing medium comprises a polymeric precursor to diamond like carbon.

17. (Original) The invention of claim 1 wherein said field emitter comprises a quantity of silica dispersed in said mixing medium.

18. (Currently amended) A method of processing a field emitter formulation comprising the steps of: providing a first quantity of carbon black;

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providing a second quantity of a mixing medium that includes an ingredient selected from the group consisting of a photoresist, a polymer that is converted into diamond by heat, and a polymer selected from the group consisting of epoxies, polyeurethanes, polyacrylates, polyesters, and polyimides;

mixing said first quantity of carbon black and said second quantity of said mixing medium to derive said field emitter formulation.

19. (Original) The method of claim 18 further comprising providing a third quantity of silica.

20. (Original) The method of claim 18 further comprising the step of measuring said field emitter formulation for a desired vertical resistance.

21. (Original) The invention of claim 18 wherein said mixing medium comprises a photoresist.

22. (Original) The invention of claim 18 wherein said mixing medium comprises a non-photoresist.

23. (Original) The invention of claim 18 further comprising the step of curing said field emitter formulation.

24. (Original) The method of claim 18 further comprising the step of applying said field emitter formulation onto a substrate.

25. (Original) The method of claim 24 wherein said substrate comprises a conductive material.

26. (Original) The method of claim 24 wherein said substrate has a planar surface.

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27. (Original) The method of claim 24 wherein said substrate has a non-planar surface.

28. (Original) The method of claim 24 wherein said substrate comprises a flexible substrate.

29. (Withdrawn) An X-ray source comprising:

a substrate;

a field emitter composition provided along a surface of said substrate, said field emitter composition comprising carbon black,

a conductive layer provided along an upper support structure; such that when said conductive layer is struck by impinging high-energy electrons emitted from said field emitter composition, said upper support structure converts said impinging high-energy electrons into x-rays.

30. (Withdrawn) The invention of claim 29 wherein a grid is provided between said upper support structure and said conductive layer.

31. (Withdrawn) The invention of claim 29 wherein said carbon black is dispersed in a mixing medium.

32. (Withdrawn) The invention of claim 29 wherein said conductive layer comprises Mo, Cu, W, or other like material.

33. (Withdrawn) The invention of claim 29 wherein said upper support structure comprises a low atomic mass material.

34. (Withdrawn) The invention of claim 29 wherein said emitter composition further comprises silica.

35. (Withdrawn) A high energy electron source comprising:

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a substrate;

a field emitter composition provided along a surface of said substrate, said field emitter composition comprising carbon black;

an upper support structure comprising a plurality of apertures; wherein said structure also comprises an electron transparent film and also comprises a metallic grid; wherein energizing said metallic grid attracts electrons emitted from said field emitter composition.

36. (New) A method of processing a field emitter formulation comprising the steps of:

providing a first quantity of carbon black;

providing a second quantity of a mixing medium;

mixing said first quantity of carbon black and said second quantity of said mixing medium to derive said field emitter formulation;

applying the formulation to a substrate and allowing the formulation to cure to form a substrate including a cured field emitter composition layer; and

planarizing the cured field emitter composition layer by chemical mechanical polishing.

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